



# 2007 Consumer Survey on Data Security

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Independently Conducted by



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# 2007 Consumer Survey on Data Security

By Dr. Larry Ponemon, June 25, 2007

## Executive summary

As more consumers become the victims of data breach, concern about the security of their personal information is increasing and tolerance for organizations' negligent information handling practices is decreasing. Further, in the eyes of consumers, data breach incidents are not all the same. Consumers worry more about some types of data than others. They are also more concerned when certain types of organizations engage in selling their personal information.

Commissioned by Vontu, Ponemon Institute has independently conducted the *2007 Survey on Consumer Privacy* to better understand what concerns consumers most about the loss, theft or wrongful disclosure of their personal information. Our survey queried 786 consumers who reside in the United States.

The survey focused on the following key issues:

- Are consumers worried about data breaches and the security of their personal information? If so, what types of personal information do they worry most about losing?
- Do consumers believe that personal information collected and used by specific industries are more or less susceptible to loss or theft?
- Are there differences among younger and older respondents in terms of security concerns or worries (i.e., does a privacy age gap exist)?
- Do security concerns affect the willingness of respondents to share sensitive or personal information in the online environment?
- What do consumers think about the buying and selling of their personal information? And, are there particular industries that create the most concern among consumers when their personal information is transacted?

## What our study reveals

In the wake of massive data breaches at businesses, educational institutions and medical facilities, consumers are modifying their purchasing behavior out of concern for the security of their personal information. Our study shows that the increase in notable data loss incidents such as TJX may affect consumers' propensity to buy products with a credit card, or register on a new website. In general, it appears that fear about data loss and resulting identity crimes may limit consumers' willingness to share certain types of personal information.

The high percentage of individuals that have been notified of a data loss event has contributed to increased security worries, as the vast majority of those notified reported concern about the event. These data breaches may negatively impact consumer buying behavior, including reluctance to use electronic payment methods to purchase from an online merchant they don't know, and unwillingness to provide certain types of personal data when registering online.

Our study finds that a majority of respondents are changing their purchasing behavior due to heightened security concerns. Here are some of the highlights of our study:

- 62% of respondents have been notified that their confidential data has been lost or stolen.
- 84% of respondents who were notified reported increased concern or anxiety due to data loss events.
- 62% of respondents said that they would be more upset with a company that lost their information due to negligence than if that company lost their information as the result of a criminal enterprise or theft.
- 36% of respondents stated that they would not use their credit or debit card to make a purchase with a Web merchant they don't know.
- Respondents who have received notification are more cautious when sharing their credit card (43% vs. 32%) and debit card (44% vs. 32%). In other words, findings suggest that breach notification may affect consumer behavior.
- 45% said they would not provide their Social Security number on a Web site.

The survey identified the following types of data as the top 5 data privacy concerns of consumers:

- Medical Records
- Pharmaceutical History
- Credit Card Number
- Debit Card Number
- Social Security Number

Conversely, data pertaining to marital status, gender, date of birth, name, and travel history cause the least amount of concern among consumers. In addition, most respondents stated that they would be most concerned if their healthcare provider, pharmacy or employer lost their information. The types of organizations they are most concerned about selling their personal information include employers, health care providers, local pharmacies and attorneys.

The study also identified an apparent privacy age gap, as younger respondents (between the ages of 18 to 25 years) appear to be less concerned about the protection of certain data types when compared to older respondents (age greater than 65 years). Older respondents are more concerned about the following data categories:

- Movie Rental History
- Employment History
- Home Value
- Tax Information
- Social Security Number

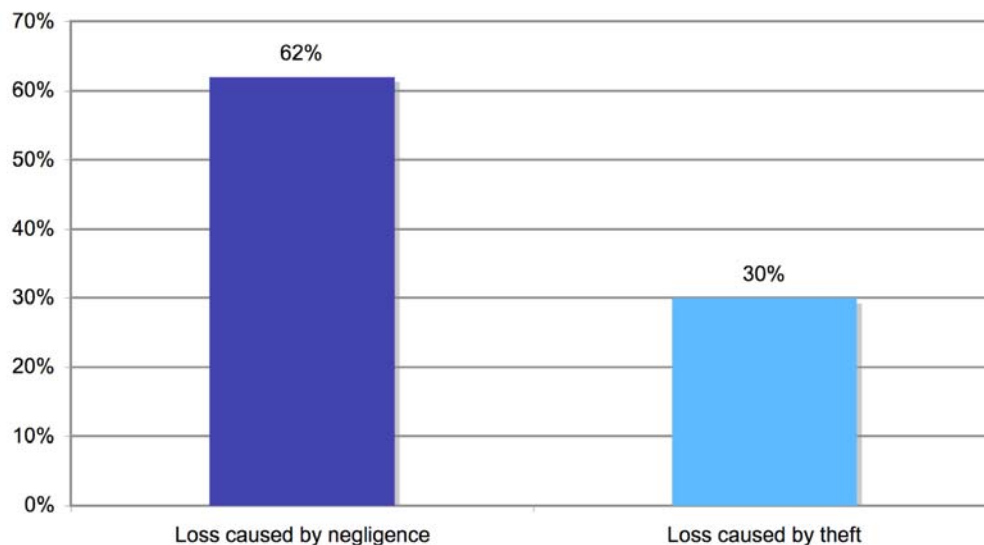
In contrast, the one area where younger respondents expressed greater concern than older respondents was in maintaining the privacy of their Web search engine terms and activity.

## Summary of major findings

In comparison to earlier Ponemon Institute studies, our results providing striking evidence that the likelihood of a data breach has increased over the past few years.<sup>1</sup> Over 62% of respondents said that they received notification of a data breach involving their personal information. About 84% of those receiving notification said that they were concerned or very concerned about this event.

Do respondents blame organizations that lose their personal information? The results shown in Bar Chart 1 shows that respondents are more than twice as likely to be upset or hold a grudge with companies when they perceive the cause of data loss as negligence rather than theft (62% vs. 30%). This is an interesting finding given that data loss resulting from criminal activity is likely to cause more harm to the breach victim than lost or misplaced information.

**Bar Chart 1**  
**What type of data breach would make you more upset with the company that lost your personal information?**



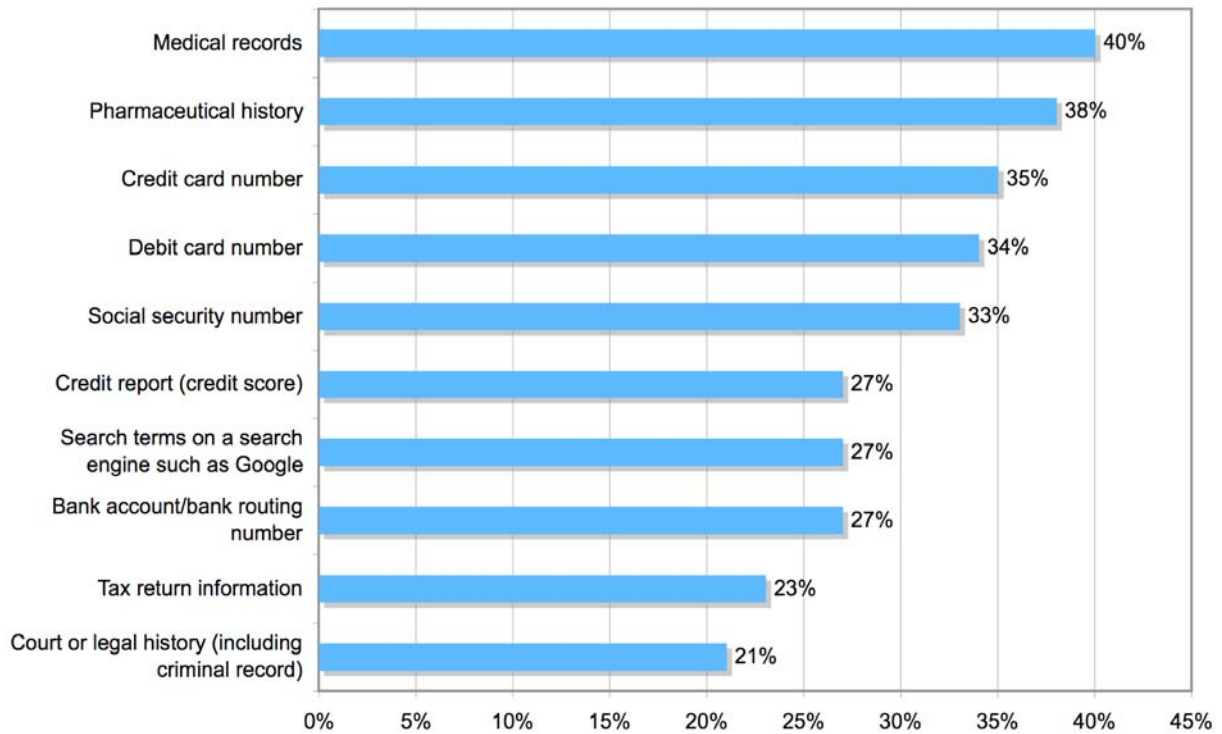
Consumer concern results in negative organizational consequences such as customer churn, which is the most costly component of a data breach.<sup>2</sup>

<sup>1</sup>See [National Survey on Data Security Breach Notification](#), Sponsored by White & Case and published by Ponemon Institute, September 2005. In this study, only 11% of respondents recall receiving notice.

<sup>2</sup> See [Cost of Data Breach, Study](#). Sponsored by Vontu and PGP Corporation and published by Ponemon Institute, October 2006

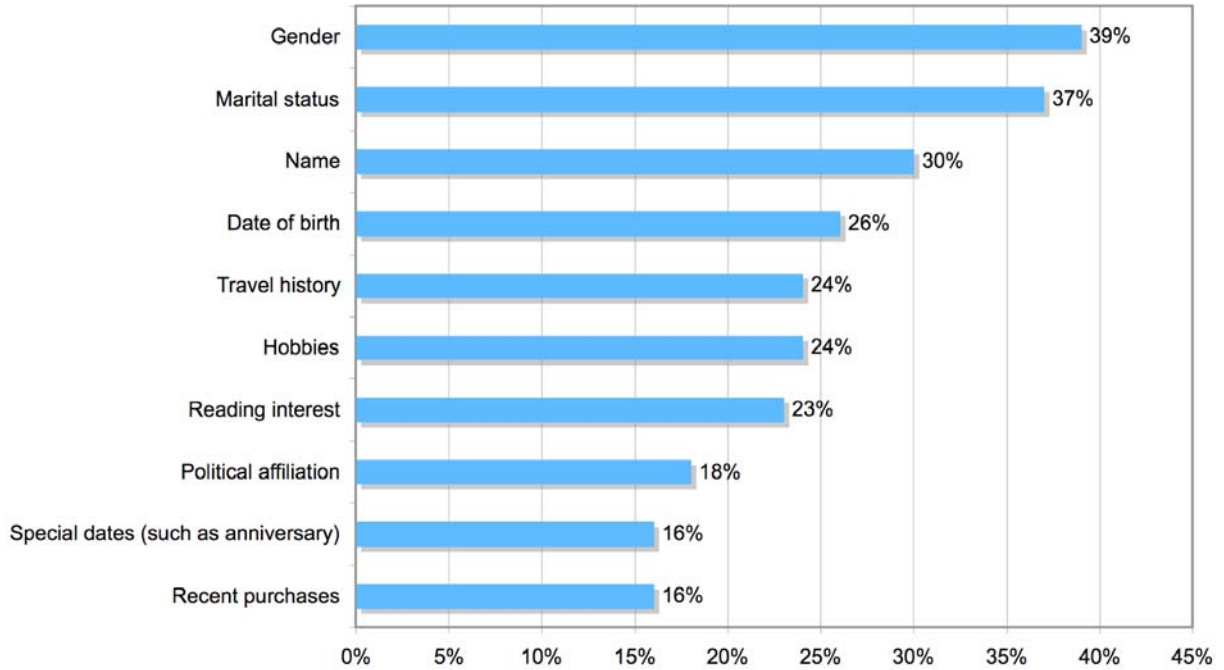
As shown in Bar Chart 2, consumers' concerns about data breach are inextricably linked to the nature of information that is lost or stolen. The personal data representing the greatest concern to consumers are: (1) medical records, (2) pharmaceutical history, (3) credit card number, (4) debit card number, and (5) Social Security number.

**Bar Chart 2**  
**If your personal information was either lost or stolen, what kinds of data loss would concern you the most?**



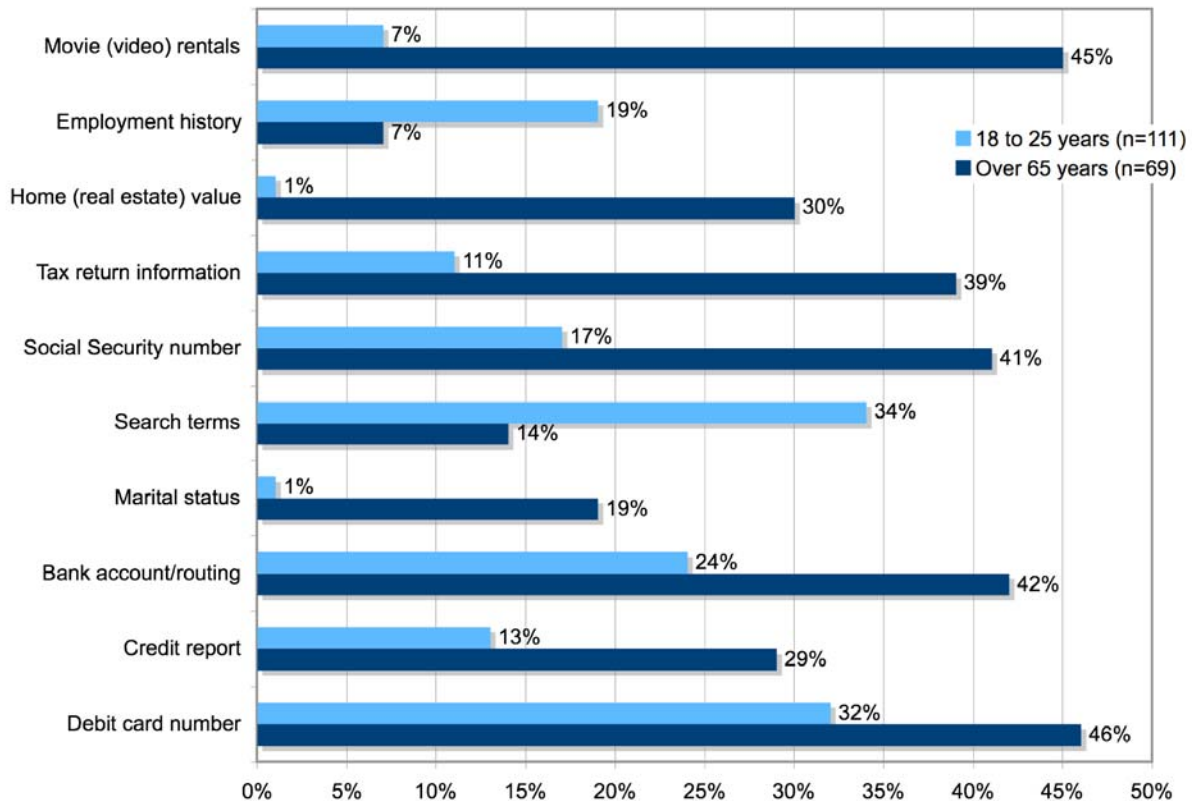
As shown in Bar Chart 3, the personal data representing the least concern to consumer if lost or stolen are (1) gender, (2) marital status, (3) full name, (5) date of birth, and (6) travel history.

**Bar Chart 3**  
**If your personal information was either lost or stolen,**  
**what kinds of data loss would concern you the least?**



Does a privacy age gap exist? Bar Chart 4 shows that younger respondents (ages between 18 to 25 years) appear to be less concerned about the protection of certain data types when compared to older respondents (age greater than 65 years). The data categories showing the widest age gap where older respondents are **more concerned** than younger respondents are: (1) movie rental history, (2) employment history, (3) home value, (4) tax information, and (5) Social Security number. In contrast, privacy mishaps concerning search terms or phrases on a search engine were of greater concern for younger respondents than older respondents.

**Bar Chart 4**  
**If your personal information was either lost or stolen, what kinds of data loss would concern you the most? Maximum differences between younger (18 to 25 years) and older (great than 65 years) respondents**



Respondents were asked to rate different types of organizations to determine their level of worry if this organization reported a data breach to them. Consistent with above findings on data types, we found the following organizations most likely to cause significant concern or worry in the event of lost or stolen personal data:

- Health care provider (43%)
- Local pharmacy (43%)
- Employer (42%)
- Federal government (39%)
- Banking institutions (38%)

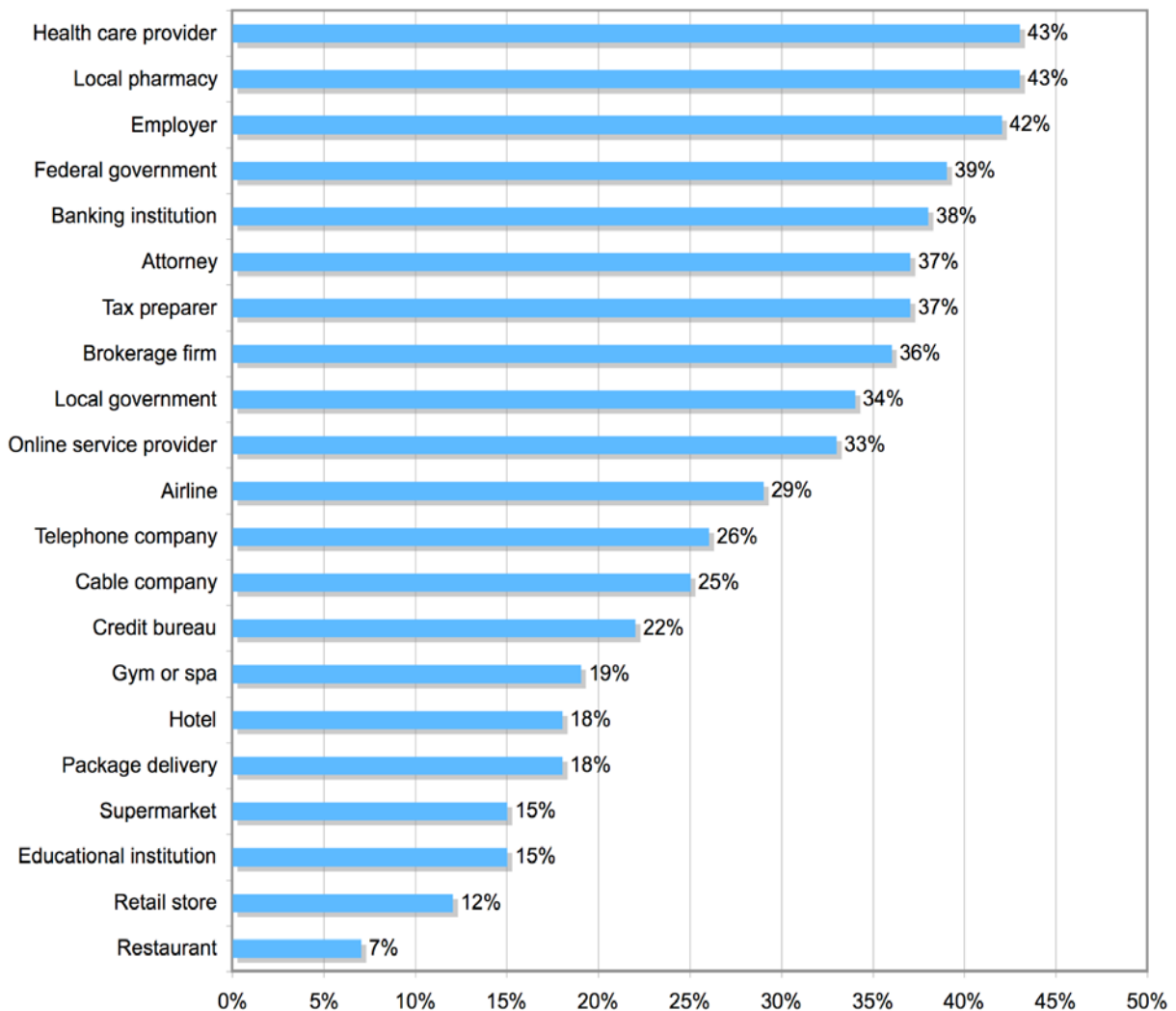
The organizations least likely to cause concern or worry in the event of a data breach are:

- Restaurants (7%)
- Retail stores (12%)
- Educational institutions (15%)
- Supermarkets (15%)
- Package delivery services (18%)

Please note that the percentage next to each organization is the percent of respondents who said they would be **most concerned** if this organization lost their personal information. It is interesting to see restaurants and retailers at the bottom of the list given that these organizations are the most likely to report a data breach involving credit or debit card information.

Bar Chart 5 provides all 21 organizational types in ascending order.

**Bar Chart 5**  
**What organizations concern you the most if they leak your personal information by mistake or theft?**



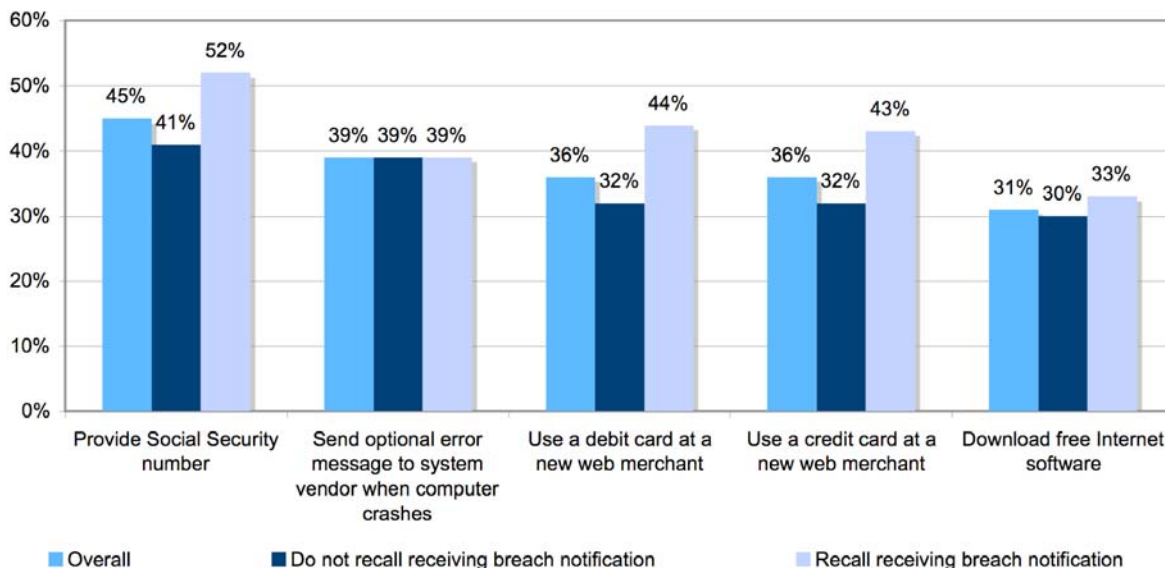
As noted above, consumers' worry about data breach may impact their online purchasing behaviors. Respondents said that they would not perform certain activities online for fear or concern about their privacy. As shown in Bar Chart 6, the top five activities that consumers would not do as a result of privacy concern or worry are:

- 45% said they would not provide their Social Security number online (for instance when registering at a new site).<sup>3</sup>
- 39% said they would not send an optional error message report back to their software vendor (such as Microsoft) in the event of a crash
- 36% said they would not use their debit card at a Web merchant they don't know
- 36% said they would not use their credit card at a Web merchant they don't know
- 31% said they would not download "free" internet software.

Bar Chart 6 also shows results for a sub-sample of respondents (62%) who recall receiving notification of a data breach, and the remaining 38% who do not recall receiving such notification. As can be seen, respondents who received notification are more cautious when sharing their Social Security number (52% vs. 41%), credit card (43% vs. 32%) and debit card (44% vs. 32%). In other words, findings suggest that breach notification may affect consumer behavior.

**Bar Chart 6**

**Is there anything you won't do online because of fear about privacy? The top five choices for overall sample, subsample of respondents who were notified and subsample of respondents who do not recall any notification.**



Respondents' privacy concerns appear to vary when asked about the types of organizations that might **sell** or **buy** their personal information. The following organizations would cause the greatest concern – with the percentage next to each organizational type is the percent of respondents who said they would be most concerned if the organization **sold** their personal information:

- Employer (45%)
- Health care provider (44%)

<sup>3</sup> While no one would advocate that consumers divulge their Social Security number online, this is a very large number, and a potential issue for companies who require a Social Security number as part of a customer or employee lookup function.

- Local pharmacy (43%)
- Attorney (42%)
- Tax preparer (41%)

The following organizations would cause the greatest concern among respondents when their personal information is **bought** or acquired:

- Federal government (45%)
- Local government (34%)
- Employer (33%)
- Attorney (28%)
- Tax preparer (28%)

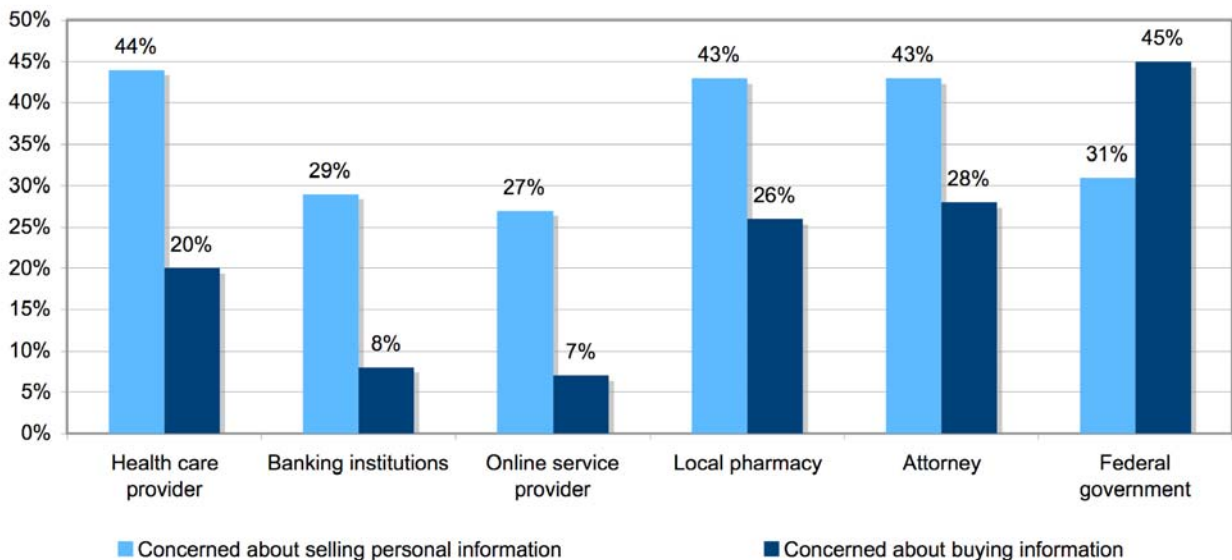
Our survey results suggest that while consumers hold negative perceptions about both the selling and buying of their information, they are definitely more concerned when organizations sell their personal data in most cases.

As shown in Bar Chart 7, the organizational types showed the widest gap between the above mentioned buying and selling of their personal information (where Diff = percentage selling – percentage buying):

- Health care providers (Diff = 24%)
- Banking institutions (Diff = 21%)
- Online service providers (Diff = 20%)
- Retail pharmacy (Diff = 19%)
- Attorney (Diff = 14%)

The federal government is the only entity where buying personal information is of greater concern than selling personal information (Diff = -14%).

**Bar Chart 7**  
**What organizations or types of entities are you most concerned about selling or buying your personal information (maximum differences)?**



## Other findings

For respondents who received notification of a data breach, 39% said they suffered some negative consequence as a result of the incident. However, the vast majority of these respondents did not suffer monetary damages such as identity theft or fraud.

In summary, data breach incidents are not all the same in the eyes of consumers. The severity of a breach appears to depend on the personal data lost or stolen as well as the type of organization that reports the negative event. Our findings also suggest that respondents are willing to forgive organizations that experience criminal theft, and less willing to forgive negligence. Finally, the issue of buying or selling information does appear to impact privacy concerns.

## Sample

As shown in Table 1, a random sampling frame of 11,387 adult-aged individuals who reside within the United States was used to recruit participants to this Web survey. Our randomly selected sampling frame was selected from national panel of consumers built by Ponemon Institute.

<b>Table 1 Sample results</b>	<b>Freq.</b>	<b>Pct%</b>
Total sampling frame	11387	100.0%
Total invitations sent	10932	96.0%
Total bounce back	801	7.0%
Total returns	913	8.0%
Total rejected instruments	127	1.1%
Final sample	786	6.9%

In total, 913 respondents completed their survey results during an eight day research period. Of returned instruments, 127 survey forms were rejected because of reliability checks. A total of 786 surveys were used as our final sample. This sample represents a 6.9% net response rate. The margin of error on all adjective scale and Yes/No/Unsure responses is  $\leq 3\%$ .

Over 90% of respondents completed all survey items within 14 minutes. Respondents were given the following instruction before starting the survey.

Dear Participant,

The purpose of this survey is to learn what you think about privacy of your personal information. Please refer to the following definitions when answering survey questions:

Personal information – information about yourself and your family. This information may include name, address, telephone numbers, email address, Social Security number, other personal identification numbers, access codes, age, gender, income, employment history, performance evaluations, benefit plans, health insurance activities and other data about you. It also may include your email records, files and other documents saved on your computer.

Privacy rights – An organization’s obligation to keep your personal information safe and secure. This includes the commitment not to share your sensitive personal information without a just cause or without obtaining your consent to do so.

Your responses are completely confidential. No personally identifiable information is collected by us. Thank you for completing this survey.

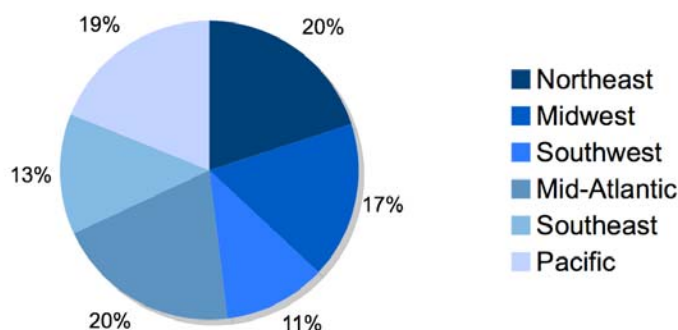
Following are demographics and organizational characteristics for 786 respondents. Table 1a reports respondents' age range. Table 1b provides the self-reported household income levels of respondents. As can be seen, over 57% of respondents are below 45 years old and 54% have household income at or below \$60,000.

Table 2a Age:	Freq.	Pct%
18 to 25	111	14%
26 to 35	182	23%
36 to 45	156	20%
46 to 55	172	22%
56 to 65	96	12%
66 to 75	60	8%
75+	9	1%
Total	786	100%

Table 2b Household Income:	Freq.	Pct%
Less than \$20,000	98	12%
\$20,000 to \$40,000	170	22%
\$41,000 to \$60,000	154	20%
\$61,000 to \$80,000	113	14%
\$81,000 to \$100,000	106	13%
\$101,000 to \$150,000	95	12%
\$151,000 to \$200,000	37	5%
\$201,000+	13	2%
Total	786	100%

Pie Chart 1 reports the percentage distribution of respondents by six region of the United States. In general, respondents from all major regions (42 states) are represented in our study. As shown, the Northeast and Mid-Atlantic regions represent the largest regional segments (at 20%). The smallest region is the Southwest (11%) followed by the Southeast (13%).

**Pie Chart 1  
Geographic distribution by US Region**



On average, respondents have more than a high school education. In total, 51% of respondents are females and 49% are males.

The detailed findings are reported below. The survey question frequencies and percentage frequencies are reported in tabular format. The abbreviation "Pct%" denotes that the table percentages sum to the sample total. The column heading "Total%" means that the table percentages sum to the response sample total (which is greater than the sample total if a given question allows more than one response).

## Detailed results

<b>Table 3a: Did you ever receive notification from a business or governmental organization to inform you that your personal information was lost or stolen?</b>	<b>Freq.</b>	<b>Pct%</b>
Yes	488	62%
No	112	14%
Cannot recall	186	24%
Total	786	100%

<b>Table 3b: If yes, were you concerned after learning that your personal information was lost or stolen?</b>	<b>Freq.</b>	<b>Pct%</b>
Yes	412	84%
No	76	16%
Total	488	100%

<b>Table 4: I would be more upset with the company reporting the breach if it lost my personal information because of simple negligence rather than criminal activity.</b>	<b>Freq.</b>	<b>Pct%</b>
Strongly agree	105	13%
Agree	386	49%
Unsure	156	20%
Disagree	84	11%
Strongly disagree	55	7%
Total	786	100%

<b>Table 5: I would be more upset with the company reporting the breach if my data was stolen by a criminal such as a computer hacker rather than lost because of the company's negligence.</b>	<b>Freq.</b>	<b>Pct%</b>
Strongly agree	52	7%
Agree	186	24%
Unsure	161	20%
Disagree	300	38%
Strongly disagree	87	11%
Total	786	100%

<b>Table 6: Even if the data breach did not result in any harm to me, I would be more upset if:</b>	<b>Freq.</b>	<b>Pct%</b>
The loss was due to negligence rather than criminal activity	291	37%
The loss was due to criminal activity rather than negligence	149	19%
I feel equally about both	206	26%
Unsure	140	18%
Total	786	100%

<b>Table 7: If your personal information was either lost or stolen, what kinds of data loss would concern you the most? Please select the top seven items in terms of your <u>maximum</u> level of worry or concern if this data was either lost or stolen.</b>	<b>Freq.</b>	<b>Pct%</b>	<b>Rank</b>
Name	2	0%	41
Home address	22	3%	29
Email address	29	3%	26
Home telephone	21	2%	30
Gender	8	1%	38
Cellular phone	26	3%	27
Date of birth	3	0%	40
Names of family members	66	8%	20
Special dates (such as an anniversary)	9	1%	36
Recent purchases	9	1%	36
Credit card number	305	35%	3
Debit card number	297	34%	4
Name of employer	13	1%	32
Salary information	87	10%	19
Job performance data	38	4%	24
Bank account/bank routing number	235	27%	8
Credit report (credit score)	237	27%	6
Location tracking information	137	16%	14
Educational background	11	1%	34
Employment history	135	15%	16
Medical records	351	40%	1
Pharmaceutical history	331	38%	2
Veteran status	4	0%	39
Marital status	31	4%	25
Sexual orientation	144	16%	12
Reading interest	140	16%	13
Hobbies	11	1%	34
Political affiliation	47	5%	22
Political or social activism	45	5%	23
Religion	89	10%	18
Race or ethnic background	116	13%	17
Social Security number	292	33%	5
Driver's license number	180	21%	11
Court or legal history (including criminal record)	184	21%	10
Home (real estate) value	25	3%	28
Passport or visa number	12	1%	33
Travel history	16	2%	31
Telephone call details	60	7%	21
Movie (video) rentals	136	16%	15
Biometrics (voice, fingerprint)	1	0%	42
Tax return information	205	23%	9
Search terms on a search engine such as Google	236	27%	7
Total	4346	496%	

<b>Table 8</b> <b>If your personal information was either lost or stolen, what kinds of data loss would concern you the least? Please select the top seven items in terms of your <u>minimum</u> level of worry or concern if this data was either lost or stolen.</b>	<b>Freq.</b>	<b>Pct%</b>	<b>Rank</b>
Gender	305	39%	1
Marital status	287	37%	2
Name	239	30%	3
Date of birth	208	26%	4
Travel history	187	24%	5
Hobbies	186	24%	6
Reading interest	180	23%	7
Special dates (such as an anniversary)	138	18%	8
Political affiliation	128	16%	9
Recent purchases	124	16%	10
Biometrics (voice, fingerprint)	121	15%	11
Employment history	120	15%	12
Educational background	112	14%	13
Movie (video) rentals	111	14%	14
Home address	109	14%	15
Driver's license number	108	14%	16
Email address	99	13%	17
Home (real estate) value	89	11%	18
Name of employer	87	11%	19
Home telephone	75	10%	20
Names of family members	74	9%	21
Job performance data	56	7%	22
Salary information	55	7%	23
Court or legal history (including criminal record)	55	7%	23
Search terms on a search engine such as Google	53	7%	25
Cellular phone	45	6%	26
Veteran status	35	4%	27
Political or social activism	28	4%	28
Religion	25	3%	29
Race or ethnic background	24	3%	30
Social Security number	22	3%	31
Sexual orientation	20	3%	32
Location tracking information	19	2%	33
Passport or visa number	12	2%	34
Credit report (credit score)	7	1%	35
Tax return information	3	0%	36
Pharmaceutical history	2	0%	37
Telephone call details	2	0%	37
Bank account/bank routing number	1	0%	39
Credit card number	0	0%	40
Debit card number	0	0%	40
Medical records	0	0%	40
<b>Total</b>	<b>3551</b>	<b>452%</b>	

What organizations concern you the most if they leak your personal information by mistake or theft? Please rate each type of organization using the scale provided below each statement based solely on your level of concern if your information is leaked to unauthorized parties

<b>Table 8a: I would be very concerned if my health care provider (such as your physician or dentist) leaked my personal information.</b>	<b>Freq.</b>	<b>Pct%</b>
Strongly agree	341	43%
Agree	347	44%
Unsure	73	9%
Disagree	13	2%
Strongly disagree	12	2%
Total	786	100%

<b>Table 8b: I would be very concerned if the local pharmacy leaked my personal information.</b>	<b>Freq.</b>	<b>Pct%</b>
Strongly agree	337	43%
Agree	350	45%
Unsure	75	10%
Disagree	11	1%
Strongly disagree	13	2%
Total	786	100%

<b>Table 8c: I would be very concerned if my primary banking institution leaked my personal information.</b>	<b>Freq.</b>	<b>Pct%</b>
Strongly agree	298	38%
Agree	364	46%
Unsure	99	13%
Disagree	10	1%
Strongly disagree	15	2%
Total	786	100%

<b>Table 8d: I would be very concerned if my brokerage firm leaked my personal information.</b>	<b>Freq.</b>	<b>Pct%</b>
Strongly agree	281	36%
Agree	359	46%
Unsure	87	11%
Disagree	34	4%
Strongly disagree	25	3%
Total	786	100%

<b>Table 8e: I would be very concerned if my local supermarket leaked my personal information.</b>	<b>Freq.</b>	<b>Pct%</b>
Strongly agree	119	15%
Agree	239	30%
Unsure	274	35%
Disagree	134	17%
Strongly disagree	20	3%
Total	786	100%

<b>Table 8f: I would be very concerned if my <i>telephone company</i> (including wireless) leaked my personal information.</b>	<b>Freq.</b>	<b>Pct%</b>
Strongly agree	207	26%
Agree	287	37%
Unsure	184	23%
Disagree	87	11%
Strongly disagree	21	3%
Total	786	100%

<b>Table 8g: would be very concerned if my <i>cable company</i> leaked my personal information.</b>	<b>Freq.</b>	<b>Pct%</b>
Strongly agree	199	25%
Agree	280	36%
Unsure	189	24%
Disagree	88	11%
Strongly disagree	30	4%
Total	786	100%

<b>Table 8h: I would be very concerned if my favorite <i>online service provider</i> (such as Google, Yahoo, AOL, and MSN) leaked my personal information including terms or phrases used for Internet searches.</b>	<b>Freq.</b>	<b>Pct%</b>
Strongly agree	259	33%
Agree	225	29%
Unsure	222	28%
Disagree	35	4%
Strongly disagree	45	6%
Total	786	100%

<b>Table 8i. I would be very concerned if my <i>tax accountant, tax preparer or tax software provider</i> leaked my personal information.</b>	<b>Freq.</b>	<b>Pct%</b>
Strongly agree	288	37%
Agree	335	43%
Unsure	86	11%
Disagree	35	4%
Strongly disagree	42	5%
Total	786	100%

<b>Table 8j. I would be very concerned if my <i>attorney or legal advisor</i> leaked my personal information.</b>	<b>Freq.</b>	<b>Pct%</b>
Strongly agree	293	37%
Agree	297	38%
Unsure	117	15%
Disagree	36	5%
Strongly disagree	43	5%
Total	786	100%

<b>Table 8k. I would be very concerned if a <i>package delivery services</i> such as UPS, Federal Express or post office leaked my personal information.</b>	<b>Freq.</b>	<b>Pct%</b>
Strongly agree	145	18%
Agree	259	33%
Unsure	208	26%
Disagree	99	13%
Strongly disagree	75	10%
Total	786	100%

<b>Table 8l. I would be very concerned if an <i>airline</i> that I fly leaked my personal information.</b>	<b>Freq.</b>	<b>Pct%</b>
Strongly agree	230	29%
Agree	270	34%
Unsure	139	18%
Disagree	75	10%
Strongly disagree	72	9%
Total	786	100%

<b>Table 8m. I would be very concerned if a <i>hotel</i> that I stayed at leaked my personal information.</b>	<b>Freq.</b>	<b>Pct%</b>
Strongly agree	145	18%
Agree	209	27%
Unsure	246	31%
Disagree	111	14%
Strongly disagree	75	10%
Total	786	100%

<b>Table 8n. I would be very concerned if an <i>educational institution</i> that I attended leaked my personal information.</b>	<b>Freq.</b>	<b>Pct%</b>
Strongly agree	117	15%
Agree	204	26%
Unsure	245	31%
Disagree	120	15%
Strongly disagree	100	13%
Total	786	100%

<b>Table 8o. I would be very concerned if my <i>gym or spa</i> leaked my personal information.</b>	<b>Freq.</b>	<b>Pct%</b>
Strongly agree	151	19%
Agree	210	27%
Unsure	235	30%
Disagree	109	14%
Strongly disagree	81	10%
Total	786	100%

<b>Table 8p. I would be very concerned if my favorite <i>retail store</i> leaked my personal information.</b>	<b>Freq.</b>	<b>Pct%</b>
Strongly agree	98	12%
Agree	215	27%
Unsure	265	34%
Disagree	112	14%
Strongly disagree	96	12%
Total	786	100%

<b>Table 8q. I would be very concerned if my favorite <i>restaurant</i> leaked my personal information.</b>	<b>Freq.</b>	<b>Pct%</b>
Strongly agree	56	7%
Agree	215	27%
Unsure	307	39%
Disagree	112	14%
Strongly disagree	96	12%
Total	786	100%

<b>Table 8r. I would be very concerned if the <i>federal government</i> leaked my personal information.</b>	<b>Freq.</b>	<b>Pct%</b>
Strongly agree	310	39%
Agree	249	32%
Unsure	87	11%
Disagree	75	10%
Strongly disagree	65	8%
Total	786	100%

<b>Table 8s: I would be very concerned if my <i>local government</i> leaked my personal information.</b>	<b>Freq.</b>	<b>Pct%</b>
Strongly agree	268	34%
Agree	291	37%
Unsure	93	12%
Disagree	76	10%
Strongly disagree	58	7%
Total	786	100%

<b>Table 8t. I would be very concerned if my <i>employer</i> leaked by personal information.</b>	<b>Freq.</b>	<b>Pct%</b>
Strongly agree	331	42%
Agree	299	38%
Unsure	78	10%
Disagree	33	4%
Strongly disagree	45	6%
Total	786	100%

<b>Table 8u. I would be very concerned if a <i>credit bureau</i> leaked by personal information (credit report).</b>	<b>Freq.</b>	<b>Pct%</b>
Strongly agree	176	22%
Agree	243	31%
Unsure	268	34%
Disagree	67	9%
Strongly disagree	32	4%
Total	786	100%

<b>Table 9. Please select no more than three organizations that would cause you the <i>most concern</i> if they lost your personal information.</b>	<b>Freq.</b>	<b>Pct%</b>	<b>Rank</b>
Health care provider	249	32%	2
Local pharmacy	248	32%	3
Banking institution	228	29%	5
Stock brokerage firm	78	10%	10
Supermarket	3	0%	16
Telephone company	12	2%	12
Cable company	8	1%	13
Online service provider	215	27%	8
Tax preparer	219	28%	6
Attorney	216	27%	7
Package delivery service	1	0%	17
Airline	5	1%	14
Hotel	1	0%	17
Educational institution	5	1%	14
Gym or spa	1	0%	17
Retail store	1	0%	17
Restaurant	0	0%	21
Federal government	243	31%	4
Local government	165	21%	9
Table continued			
Employer	250	32%	1
Credit Bureau	34	4%	11

<b>Q8b. Please select no more than three organizations that would cause you the <i>least concern</i> if they lost your personal information.</b>	<b>Freq.</b>	<b>Pct%</b>	<b>Rank</b>
Health care provider	1	0%	21
Local pharmacy	2	0%	19
Banking institution	5	1%	18
Stock brokerage firm	25	3%	13
Supermarket	227	29%	3
Telephone company	78	10%	11
Cable company	92	12%	9
Online service provider	52	7%	12
Tax preparer	19	2%	14
Attorney	13	2%	16
Package delivery service	175	22%	6

<b>Table 8b continued</b>			
Airline	154	20%	7
Hotel	201	26%	5
Educational institution	134	17%	8
Gym or spa	211	27%	4
Retail store	300	38%	1
Restaurant	253	32%	2
Federal government	9	1%	17
Local government	16	2%	15
Employer	2	0%	19
Credit bureau	81	10%	10

<b>Table 9. Is there anything you won't do online because of fear about privacy? Please check all that apply.</b>	<b>Freq.</b>	<b>Total%</b>
Provide my <b>Social Security</b> number when registering on an online site	355	45%
Send computer software or hardware company an optional error message when my system crashes	309	39%
Buy a product with my <b>debit card</b> from a Web merchant that I don't know	285	36%
Buy a product with my <b>credit card</b> from a Web merchant that I don't know	282	36%
Download "free" Internet software	243	31%
Provide my <b>Driver's License</b> number when registering an on online site	206	26%
Visit <b>medical</b> or pharmaceutical product Web sites (that require registration)	201	26%
Visit <b>gaming</b> Web sites	199	25%
Visit <b>adult content</b> Web sites	193	25%
Buy a product from a Web merchant that I don't know by giving my <b>bank account</b> number and bank routing number	171	22%
Provide <b>personal facts</b> about me and my family when registering online	115	15%
Write and post a blog entry	90	11%
Do <b>searches</b> on Google, Yahoo or other search engines that my reveal my private interests	89	11%
Visit political or social action Web sites (that require registration)	89	11%
Other	15	2%
<b>Total</b>	<b>2842</b>	<b>362%</b>

<b>Table 10. What personal data are you willing to give up for convenience or promotions such as offers of free products? Please check all the information types that you are willing to share to obtain.</b>	<b>Freq.</b>	<b>Total%</b>	<b>Rank</b>
Name	314	40%	1
Home address	266	34%	3
Email address	233	30%	5
Home telephone	137	17%	14
Gender	244	31%	4
Cellular phone	94	12%	22
Date of birth	272	35%	2
Names of family members	125	16%	16
Special dates (such as an anniversary)	126	16%	15
Credit card number	111	14%	18
Debit card number	97	12%	21
Name of employer	200	25%	7
Veteran status	120	15%	17

<b>Table 10 continued</b>			
Marital status	218	28%	6
Sexual orientation	26	3%	26
Reading interest	197	25%	8
Hobbies	193	25%	10
Political affiliation	196	25%	9
Religion	48	6%	24
Race or ethnic background	46	6%	25
Social Security number	99	13%	20
Driver's License number	187	24%	12
Bank account/bank routing number	108	14%	19
Educational background	142	18%	13
Employment history	82	10%	23
Search terms on search engine	191	24%	11
Total	4072	518%	

<b>Table 11. What personal data are you <i>never</i> willing to give up regardless of convenience or promotions such as offers of free products? Please check all the information types that you are willing to share to obtain.</b>			
	<b>Freq.</b>	<b>Total%</b>	<b>Rank</b>
Name	8	1%	26
Home address	25	3%	24
Email address	31	4%	22
Home telephone	167	21%	15
Gender	11	1%	25
Cellular phone	202	26%	13
Date of birth	56	7%	20
Names of family members	328	42%	3
Special dates (such as an anniversary)	107	14%	19
Credit card number	323	41%	6
Debit card number	322	41%	7
Name of employer	118	15%	16
Veteran status	31	4%	22
Marital status	43	5%	21
Sexual orientation	325	41%	5
Reading interest	306	39%	10
Hobbies	118	15%	16
Political affiliation	115	15%	18
Religion	223	28%	12
Race or ethnic background	201	26%	14
Social Security number	359	46%	1
Driver's License number	235	30%	11
Bank account/bank routing number	327	42%	4
Educational background	317	40%	8
Employment history	329	42%	2
Search terms on search engine	317	40%	8
Total	4944	629%	

<b>Table 12. What organizations or types of entities are you most concerned about <i>selling</i> your personal information.</b>	<b>Freq.</b>	<b>Total%</b>	<b>Rank</b>
Health care provider	344	44%	2
Local pharmacy	341	43%	3
Banking institution	228	29%	8
Stock brokerage firm	96	12%	11
Supermarket	13	2%	16
Telephone company	15	2%	15
Cable company	51	6%	13
Online service provider	212	27%	9
Tax preparer	320	41%	5
Attorney	328	42%	4
Package delivery service	1	0%	18
Airline	54	7%	12
Hotel	1	0%	18
Educational institution	33	4%	14
Gym or spa	1	0%	18
Retail store	2	0%	17
Restaurant	1	0%	18
Federal government	246	31%	6
Local government	238	30%	7
Employer	354	45%	1
Credit bureau	193	25%	10

<b>Table 13. What organizations or types of entities are you most concerned about <i>buying</i> your personal information.</b>	<b>Freq.</b>	<b>Total%</b>	<b>Rank</b>
Health care provider	154	20%	7
Local pharmacy	204	26%	6
Banking institution	59	8%	10
Stock brokerage firm	82	10%	9
Supermarket	13	2%	14
Telephone company	4	1%	18
Cable company	7	1%	17
Online service provider	58	7%	11
Tax preparer	218	28%	5
Attorney	220	28%	4
Package delivery service	0	0%	20
Airline	13	2%	14
Hotel	15	2%	13
Educational institution	56	7%	12
Gym or spa	3	0%	19
Retail store	10	1%	16
Restaurant	0	0%	20
Federal government	353	45%	1
Local government	269	34%	2
Employer	256	33%	3
Credit bureau	94	12%	8

<b>Table 14. What do you think most companies are doing with the personal information you provide them?</b>	<b>Freq.</b>	<b>Total%</b>
I have no idea	265	34%
Using this information for legitimate business purposes	300	38%
Using for future marketing and promotions	486	62%
Sharing information with their affiliates	405	52%
Selling it to other companies such as marketers	351	45%
Performing product research and surveys	147	19%
Sharing with government for national security	209	27%
Sharing with government for taxation purposes	519	66%
Using it to determine or verify your identity	299	38%
Nothing	56	7%
Total	3037	

<b>Table 15: When you share your personal information with a company, who do you think is <i>most</i> responsible for protecting this data? Please check <u>one</u> top choice.</b>	<b>Freq.</b>	<b>Pct%</b>
Individuals are responsible	65	8%
The company is responsible	384	49%
The government is responsible	157	20%
Both the company and I share responsibility	96	12%
The government, the company and I share responsibility	84	11%
Total	786	100%

<b>Table 16: When you share your personal information with a company, <u>who</u> do you think is the owner of this information? Please check <u>one</u> top choice.</b>	<b>Freq.</b>	<b>Pct%</b>
I (individuals) own it	349	44%
The company owns it	205	26%
Both the company and individuals own it	89	11%
No one owns it	54	7%
Unsure	89	11%
Total	786	100%

<b>Table 17a: Did you ever receive notification that your personal information was lost or stolen? [Reliability check]</b>	<b>Freq.</b>	<b>Pct%</b>
Yes	486	62%
No	112	14%
Cannot recall	188	24%
Total	786	100%

<b>Table 18b: If yes, did you suffer any consequences as a result of the loss or theft of your personal information?</b>	<b>Freq.</b>	<b>Pct%</b>
Yes	189	39%
No	180	37%
Cannot recall	117	24%
Total	486	100%

<b>Table 18c: If yes, please check all the consequences that you experienced as a direct result of the loss or theft of you personal information.</b>	<b>Freq.</b>	<b>Total%</b>
<b>Lost time</b> trying to determine if I was at risk or suffered harm.	145	77%
Experienced <b>identity theft</b> where someone else such as a criminal assumed my name and Social Security number and obtains new credit cards, loans or mortgages that you may be obligated to pay.	2	1%
Experienced <b>fraud</b> because someone else such as a criminal used my credit or debit card.	11	6%
Experienced <b>fraud</b> because someone accessed my private accounts such as my bank account.	6	3%
Experienced <b>inconvenience</b> waiting for a new credit or debit card to be reissued.	50	26%
Table 18c – Continued		
<b>Worrying</b> because someone had access to my personal information.	75	40%
None of the above.	7	4%
Total	296	

## Caveats

There are inherent limitations to survey research that need to be carefully considered before drawing inferences from findings. The following items are specific limitations that are germane to most Web-based surveys.

- **Non-response bias:** The current findings are based on a sample of survey returns. We sent surveys to a representative sample of individuals, resulting in a large number of usable returned responses. Despite non-response tests, it is always possible that individuals who did not participate are substantially different in terms of underlying beliefs from those who completed the instrument.
- **Sampling-frame bias:** The accuracy of contact information and the degree to which the list is representative of individuals who reside in the United States. Compensation was provided to ensure that respondents completed the survey task in a short holdout period. While compensation was held to a nominal amount, we acknowledge potential bias caused by compensating subjects to complete this research within a holdout period. Finally, because we used a Web-based collection method, it is possible that non-Web responses by mailed survey or telephone call would result in a different pattern of findings.
- **Self-reported results:** The quality of survey research is based on the integrity of confidential responses received from subjects. While certain checks and balances can be incorporated into the survey process, there is always the possibility that a subject did not provide a truthful response.

These observations are preliminary. We believe further research is needed regarding the use of database security as well as the controls necessary to secure data at rest. If you have questions or comments about this research report or you would like to obtain additional copies of the document (including permission to quote from or reuse this report), please contact us by letter, phone call or email.



## About Vontu

Vontu is the leading provider of Data Loss Prevention solutions that protect data anywhere—at rest, in motion or at the endpoint. By reducing the risk of data loss, Vontu helps organizations ensure public confidence, demonstrate compliance and maintain competitive advantage. Vontu customers include many of the world's largest and most data-driven enterprises and government agencies. Vontu has received numerous awards, including IDG's *InfoWorld* 2007 Technology of the Year Award for "Best Data Leak Prevention," as well as *SC Magazine's* 2006 U.S. Excellence Award for "Best Enterprise Security Solution" and Global Award for "Best New Security Solution." For more information, please visit [www.vontu.com](http://www.vontu.com).

## About Ponemon Institute LLC

Ponemon Institute is dedicated to independent research and education that advances responsible information and privacy management practices within business and government. Our mission is to conduct high quality, empirical studies on critical issues affecting the management and security of sensitive information about people and organizations.

As a member of the Council of American Survey Research Organizations (CASRO), we uphold strict data confidentiality, privacy and ethical research standards. We do not collect any personally identifiable information from individuals (or company identifiable information in our business research). Furthermore, we have strict quality standards to ensure that subjects are not asked extraneous, irrelevant or improper questions. For more information, please visit <http://www.ponemon.org>.